

L Number	Hits	Search Text	DB	Time stamp
1	12	nitta-hideichi.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/12 10:01
2	745	yamashita-hiroyuki.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/12 10:03
3	821	saito-jun.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/12 10:04
4	0	dry adj2 (neutraliz\$5 or neutralis\$5) same anionic near10 acid same (alkali or carbonate or bicarbonate or alkaline) same (sulfuric or sulphuric or h2so4)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/12 10:07
5	10	dry adj2 (neutraliz\$5 or neutralis\$5) same anionic near10 acid same (alkali or carbonate or bicarbonate or alkaline) and (sulfuric or sulphuric or h2so4)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/12 10:25
6	6	dry adj2 (neutraliz\$5 or neutralis\$5) same (alkylbenzene\$10 or dodecylbenzene\$10 or hlas or las or abs or sulfonic or sulphonic) same (alkali or carbonate or bicarbonate or alkaline) and (sulfuric or sulphuric or h2so4)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/12 10:38
7	777	(neutraliz\$5 or neutralis\$5) same (alkylbenzene\$10 or dodecylbenzene\$10 or hlas or las or abs or sulfonic or sulphonic) same (alkali or carbonate or bicarbonate or alkaline) same (sulfuric or sulphuric or h2so4)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/12 11:13
8	1	(neutraliz\$5 or neutralis\$5) same (anionic or alkylbenzene\$10 or dodecylbenzene\$10 or hlas or las or abs or sulfonic or sulphonic) same (so3 or (sulfur or sulphur) adj1 trioxide) same (alkali or carbonate or bicarbonate or alkaline) same unreacted near6 (sulfuric or sulphuric or h2so4)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/12 11:16
9	0	dry near5 (neutraliz\$5 or neutralis\$5) same (anionic or alkylbenzene\$10 or dodecylbenzene\$10 or hlas or las or abs or sulfonic or sulphonic) same (so3 or (sulfur or sulphur) adj1 trioxide) same (alkali or carbonate or bicarbonate or alkaline) and unreacted near6 (sulfuric or sulphuric or h2so4)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/12 11:40
10	1	dry near5 (neutraliz\$5 or neutralis\$5) same (anionic or alkylbenzene\$10 or dodecylbenzene\$10 or hlas or las or abs or sulfonic or sulphonic) same (so3 or (sulfur or sulphur) adj1 trioxide) same (alkali or carbonate or bicarbonate or alkaline)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/12 11:43
11	3	dry near5 (neutraliz\$5 or neutralis\$5) same (anionic or alkylbenzene\$10 or dodecylbenzene\$10 or hlas or las or abs or sulfonic or sulphonic) same (so3 or (sulfur or sulphur) adj1 trioxide) and (alkali or carbonate or bicarbonate or alkaline)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/12 11:44
12	3	dry near5 (neutraliz\$5 or neutralis\$5) same (anionic or alkylbenzene\$10 or dodecylbenzene\$10 or hlas or las or abs or sulfonic or sulphonic) same (so3 or (sulfur or sulphur) adj1 trioxide)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/03/12 11:44

	U	1	Document ID	Issue Date	Pages	Title	Current OR
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 20020065207 A1	20020530	7	Production of anionic surfactant granules by in situ neutralisation	510/445
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 20020061830 A1	20020523		Production of anionic surfactant granules by in situ neutralisation	510/445
3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 6541443 B1	20030401		Multifunctional detergent materials	510/512
4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 6518234 B2	20030211	7	Production of anionic surfactant granules by in situ neutralisation	510/445
5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 6518233 B2	20030211		Production of anionic surfactant granules by in situ neutralization	510/444
6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 6514930 B2	20030204		Production of anionic surfactant granules by in situ neutralisation	510/444
7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 6432905 B1	20020813		Dry neutralization process for detergent powder composition	510/441
8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 5633224 A	19970527		Low pH granular detergent composition	510/444
9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 5573697 A	19961112		Process for making high active, high density detergent granules	510/359
10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 5527489 A	19960618		Process for preparing high density detergent compositions containing particulate pH sensitive surfactant	510/294

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3	4	5
1	510/446		Emery, William Derek et al.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	510/446; 510/457		Emery, William Derek et al.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	510/276; 510/288; 510/347; 510/431; 510/453; 510/510; 510/511; 510/531		Rojo, Jose Andres	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	134/40; 510/446; 510/450; 510/457		Emery, William Derek et al.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	510/445; 510/446; 510/450; 510/457		Emery, William Derek et al.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	510/445; 510/446; 510/450; 510/457		Emery, William Derek et al.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	510/443; 510/446; 510/452		Gowrishankaran, Chandrasekaran et al.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	510/359		Porter, Terrence J.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	264/117; 264/140; 510/452; 510/495		Riddick, Eric F. et al.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	510/352; 510/444; 510/498		Tadsen, Richard L. et al.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	U	1	Document ID	Issue Date	Pages	Title	Current OR
1	<input type="checkbox"/>	<input type="checkbox"/>	US 6432905 B1	20020813	5	Dry neutralization process for detergent powder composition	510/441
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 6288016 B1	20010911	10	Disintegrant-impregnated detergent agglomerates with improved solubility	510/357
3	<input type="checkbox"/>	<input type="checkbox"/>	US 5633224 A	19970527	7	Low pH granular detergent composition	510/444
4	<input type="checkbox"/>	<input type="checkbox"/>	US 5527489 A	19960618	9	Process for preparing high density detergent compositions containing particulate pH sensitive surfactant	510/294
5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 5486317 A	19960123		Process for making detergent granules by neutralization of sulphonic acids	510/444
6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 5178798 A	19930112		Formation of detergent granules by deagglomeration of detergent dough	510/441

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3	4	5
1	510/443; 510/446; 510/452		Gowrishankaran, Chandrasekaran et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	510/441; 510/443; 510/446		Ramanan, Ganapathy Venkata et al.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	510/359		Porter, Terrence J.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	510/352; 510/444; 510/498		Tadsen, Richard L. et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	23/313R; 510/315; 510/349; 510/495; 510/536		Dorset, Andrew et al.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	510/324; 510/326; 510/351; 510/352; 510/443; 510/476; 510/507; 510/532; 510/533		Jolicoeur, John M.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	U	1	Document ID	Issue Date	Pages	Title	Current OR
1	<input type="checkbox"/>	<input type="checkbox"/>	US 5118766 A	19920602	5	Process of preparing polymer sulphonyl derivatives	525/535

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3	4	5
1	525/328.5; 525/534; 528/125; 528/126; 528/174; 528/175		Hendy, Brian N. et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DERWENT-ACC-NO: 1989-346362

DERWENT-WEEK: 198947

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TITLE: Prodn. of alkyl-sulphonate(s) of alkali metal(s) - by
sulphonation of alkyl-aryl cpds. with liq. sulphur
di:oxide and tri:oxide and neutralising with alkali
chloride(s) and carbonate(s)

INVENTOR: PRIGODA, S V; SHELOVKOVE, A B

PATENT-ASSIGNEE: YUREV V M[YUREI]

PRIORITY-DATA: 1987SU-4224848 (March 6, 1987)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
SU 1456412 A	February 7, 1989	N/A	003	N/A

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
SU 1456412A	N/A	1987SU-4224848	March 6, 1987

INT-CL (IPC): C07C143/34, C11D003/34

ABSTRACTED-PUB-NO: SU 1456412A

BASIC-ABSTRACT:

Sodium or potassium alkyl- and polyalkyl-aryl sulphonates are obtd. by sulphonation of starting 10-35C alkyl- and polyalkyl-aryl cpds. with the liq. mixt. contg. 8-15 wt.% of SO₃ in SO₂. Sulphonation is conducted at (-5) deg. C. After the sulphonation is finished, excess of SO₂ is removed by slow heating of the reaction mixt. to 60 deg. C, and the mixt. is kept at this temp. for 2 hrs. Obtd. alkylbenzosulphonic acids have compsn. (in wt.%): monoalkyl-benzenesulphonic acid 20, dialkyl benzene sulphonic acid 49.9 and tri- and polyalkyl-benzene sulphonic acid 30.1. Kerosene is added to the mixt. to

reduce its viscosity and then the mixt. is neutralised with dry powdered sodium carbonate (or chloride, or potassium carbonate or chloride), at 60 deg. C, at molar ratio of sulphonic acid to alkali cpd. of 1:1. The system is blown with nitrogen at rate 1 l/h for 3 hrs. The acid number of obtd. prod. is approx. 8 mg.KOH/1g of product.

Tests show that proposed method reduces amt. of used aq. soln. of alkali by 4-30 times.

USE/ADVANTAGE - Obtd. alkyl- and polyalkyl-aryl sulphonates are used as surfactants, e.g. in oil extn. Proposed method is simplified owing to reduced number of stages and reduced consumption of alkali. The method offers considerable savings. Bul.5/7.2.89

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: PRODUCE ALKYL SULPHONATE ALKALI METAL
SULPHONATED ALKYL ARYL
COMPOUND LIQUID SULPHUR DI OXIDE TRI OXIDE NEUTRALISE
ALKALI
CHLORIDE CARBONATE

DERWENT-CLASS: E12 H01

CPI-CODES: E10-A09B3; H01-D06;

CHEMICAL-CODES:

Chemical Indexing M3 *01*

Fragmentation Code

G011 G012 G013 G014 G015 G016 G017 G018 G020 G021

G022 G023 G024 G029 G040 G100 K0 K4 K431 M220

M224 M225 M226 M231 M232 M233 M240 M281 M282 M283

M320 M414 M510 M520 M531 M540 M630 M720 M903 M904

N203 N221 N352 N511 N512 N513 Q412 Q431 Q508 Q616

Markush Compounds

198947-E7401-P

Registry Numbers

1704X 1724X 1711X 1714X 89290 1327U 0502U

UNLINKED-DERWENT-REGISTRY-NUMBERS: 1287S; 1391S ; 1678S ; 1706S ;
1953S